



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/468,538	12/21/1999	HIDEKAZU SAKAI	0649-0710P-S	3756

7590                    08/27/2002  
BIRCH STEWART KOLASCH & BIRCH LLP  
P O BOX 747  
FALLS CHURCH, VA 220400747

EXAMINER

WALKE, AMANDA C

ART UNIT	PAPER NUMBER
1752	14

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N .	Applicant(s)
	09/468,538	SAKAI ET AL.
	Examiner	Art Unit
	Amanda C Walke	1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Pri d for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 4-9 and 11-24 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 4-9 and 11-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Pri y under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-9, 21, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Positions Z and R<sup>1</sup> of formula C-2 are undefined.

For purposes of examination, the examiner used the definitions of these positions as given in the present specification in the description of formula C-2. In the description on page 22, it is stated that the C-2 is a more specific and limited formula of C-1. Positions Z and R1 are defined on page 21 in the description of the broader formulas C-1.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 6-8, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al (5,273,866) in view of Sakai (5,573,898).

Fujita et al disclose a silver halide photographic material comprising a support having coated thereon at least one blue, green, and red emulsion layer, and one or more hydrophilic colloid layers containing a dispersion of microcrystals of at least one compound represented by

formulas I-VI which results in improved sharpness and preservability. Dyes I-IV are of structure similar to the present formulas I-III, IV, and XI. The dyes may contain cyano groups in the R2 and R5 position s (see III-27, 32), and hydrogen substituents in the R3 and R6 positions (III-34). These dyes are incorporated as a dispersion of finely divided solid into a layer of the emulsion such as a hydrophilic colloid layer to be coated onto a photographic element. The photographic material of example 1 comprises a support having coated thereon a non-coloring light-insensitive antihalation layer between the support and the light sensitive emulsion layer (column 59). The material may be used for motion pictures (column 54, lines 11-16). The dispersion can be prepared by precipitating a dye in the form of a dispersion and/ or by subjecting a dye to fine grinding by a known means such as ball mill in the presence of a dispersant or dissolve the dye in a solvent optionally adding a surface active agent. Also, as shown in Table 3, the material is treated at 40 degrees C after chemical sensitization. The dye grains should have a mean diameter of 10 micrometers or less but preferably 0.5 micrometers or less (column 35 lines 37-68). This overlaps with the range in the present claim 6. The dye appears to be added in an amount meeting the limitations of the present claim 8 (column 36, lines 38-41). These dyes may partially of completely replace colloidal silver usually present in filter or antihalation layers. The pH of the emulsion in the examples of the reference is 6.2.

Sakai teaches the use a pyrrolotriazole coupler, specifically a cyan coupler, which is of structure similar to the present formula (1) in a color photographic material. These couplers are known to provide excellent color hue (column 2, lines 5-10). Position X of the reference formula (Ib) is any group capable of splitting off from the compound by the coupling reaction with an oxidation product of an aromatic primary amine color developing agent ( see column

Art Unit: 1752

15). Position X of the formula (Ib) of the reference is the position in the present formula (C-2) where the  $-O_2C-X^2$  substituent resides. Exemplified coupler 41 contains a  $-O-COCH(CH_3)2$  as the present  $-O_2C-X^2$  substituent (in the reference position X), which in the reference is a group which links the nitrogen of a nitrogen - containing heterocyclic group to the coupling position. The reference exemplifies substituents in the present positions  $R^1$  and  $-CO_2-$   $C(R^{15})C(R^{11}R^{13})ZC(R^{14}R^{12})$  which meet the present limitations for the  $\sigma p$  value (see couplers 9, 14, 31, 35, 36, and 39-42). The grains of the reference are preferably high silver chloride grains having a chloride content of 98-100 mol % (column 61, line 56- column 62, line 19). heterocyclic group to the coupling position. Sakai teaches that pyrazoloazole couplers are better than phenol or naphthol couplers because there is less unfavorable absorption of the dyes formed by the pyrazoloazole couplers than by those formed by the conventional cyan couplers (column 1, line 16 - column 2, line 11).

Sakai teaches that pyrazoloazole couplers are better than phenol or naphthol couplers because there is less unfavorable absorption of the dyes formed by the pyrazoloazole couplers than by those formed by the conventional cyan couplers (column 1, line 16 - column 2, line 11), therefore it would have been obvious to one of ordinary skill in the art to prepare the motion picture film of Fujita et al in view of Sakai choosing to replace the phenol or naphthol couplers of Fujita et al with a pyrazoloazole coupler of Sakai to achieve improved color reproduction.

5. Claims 12-17, 19, 20, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al in view of Ohshima et al (5,391,471).

Fujita et al has been discussed above. The reference discloses the preferred pH of the silver halide emulsion, but fails to disclose the preferred pH of the film material.

Ohshima et al disclose a silver halide photographic material comprising a support, a non-light sensitive hydrophilic colloid layer coated on the support, and a silver halide emulsion layer. The reference teaches that it is preferable for the pH of the film material (the pH value of all of the constituent layers obtained by the coating the coating solution on the support) be between 5.0 and 6.5 which falls within the presently claimed range. If the pH of a silver halide material falls below 5.0, it causes a disadvantage in that the film hardening is lowered or the sensitivity is lowered. If the pH of a silver halide material exceeds 6.5, it leads to desensitization upon exposure under conditions of high humidity or sensitivity fluccuation with the change of the time interval between the completion of exposure and the beginning of processing (column 42, line 50-column 43, line 12).

With respect to the optical density, the optical density of a photographic material is a functional limitation. It is the position of the examiner that since the material of Fujita meets the physical limitations of the present claim 23, the material would also inherently meet the limitation of the present claim 15 for the optical density of the material.

Given the teachings of Ohshima et al, it would have been obvious to one of ordinary skill in the art to prepare the material of Fujita et al choosing to adjust the pH of the final film material to be from 5.0 to 6.5 to prevent a decrease in sensitivity or film hardening with reasonable expectation of achieving a material having excellent sharpness and preservability.

6. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al (or Fujita et al in view of Sakai), in view of Swank et al (4,006,025).

M.P.E.P. § 2113:

“Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)... “The Patent Office bears a lesser burden proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature” than when a product is claimed in the conventional fashion. *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

Sakai, and Fujita et al have been discussed above.

Swank et al disclose a method for preparing finely divided dispersions of dyes. The process includes heating an organic solvent to dissolve the dye then dispersing the dye droplets, possibly with the help of a surfactant, in a suitable binder. The method includes a heat treatment step in which the temperature is between 40 and 50 ° C ( column 4, lines 17-36). Performing the milling step at an elevated temperature aides in dissolving the dye and results in a dispersion having finely divided dye crystals ( column 2, lines 3-16).

Fujita et al states that the dispersion can be prepared by precipitating a dye in the form of

Art Unit: 1752

a dispersion and/ or by subjecting a dye to fine grinding by a known means such as ball mill in the presence of a dispersant or dissolve the dye in a solvent optionally adding a surface active agent, therefore it would have been obvious to one of ordinary skill in the art to prepare the material of Fujita et al or Fujita et al in view of Sakai, choosing to use the method of preparing a dye dispersion taught by Swank et al with reasonable expectation of achieving a film protected from the generation of static charge after the carbon black-containing layer is removed.

7. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al or Fujita et al in view of Sakai, and Mifune et al (4,713,321).

Sakai and Fujita et al have been discussed above, but fail to teach the use of the specific surface active agents.

Mifune et al disclose examples of surface active agents which include alkylene oxide derivatives, and glycidol derivatives.

Fujita et al states that the dispersion can be prepared by precipitating a dye in the form of a dispersion and/ or by subjecting a dye to fine grinding by a known means such as ball mill in the presence of a dispersant or dissolve the dye in a solvent optionally adding a surface active agent, therefore it would have been obvious to one of ordinary skill in the art to prepare the material of Fujita et al or Fujita et al in view of Sakai choosing to use the a surface active agent such as polyalkylene oxide as taught by Mifune et al with reasonable expectation of achieving a photographic material having excellent sharpness and preservability.

#### *Response to Arguments*

8. Applicant's arguments filed 6/24/2002 have been fully considered but they are not persuasive.

Applicant has argued that the examiner is incorrect in saying that the examples of the declaration have not compared to the prior art of record and are not commensurate in scope with the present claim limitations. As stated in the previous response, the samples used in the declaration employ a dispersing aid (claimed by dependent claim 5) and a preferred coupler of the present invention (the cyan coupler has a preferred "X" group). The independent claim, which claims the broadest "X" group requires only that "X" be a hydrogen atom or a substituent. On pages 35-37 the definition of "X" is further defined to be preferably a halogen atom, an alkoxy group, an aryloxy group, an acyloxy group, or a 5 or 6-membered nitrogen containing heterocyclic group amongst many other substituents. Furthermore, on page 43, lines 21-24 of the specification "X" is defined even further to be more preferably and specifically a 6-membered heterocyclic ring attached to the rest of the compound by the nitrogen, which is exactly what coupler 1 in the inventive examples employs. This is indeed a very specific, preferred embodiment which is being compared to an emulsion containing a coupler wherein "X" is an alkyl group (coupler 41 of Sakai). Even though the independent claim does not require the addition of the dispersing aid, dependent claim 5 does, and the one employed in the inventive examples is a preferred dispersing aid, which causes the examples to be not commensurate in scope with the present claim limitations.

Additionally, it is the position of the examiner that when one of ordinary skill in the art would prepare the material of Fujita et al in view of Sakai, the expected result would be a material having increased sharpness due to decreased bleeding of the couplers, which Sakai teaches as the advantage of using pyrazoloazole couplers rather than phenol or naphthol couplers

because there is less unfavorable absorption of the dyes formed by the pyrazoloazole couplers than by those formed by the conventional cyan couplers.

Applicant has also argued that while Fujita does teach the use of the dye of structure [XI] as a solid particle dispersion, the reference fails to teach or suggest to add the dispersion to the material by a method required by the present claim 23. As stated above and in the previous office action, Fujita et al states that the dispersion can be prepared by precipitating a dye in the form of a dispersion and/ or by subjecting a dye to fine grinding by a known means such as ball mill in the presence of a dispersant or dissolve the dye in a solvent optionally adding a surface active agent. This is then added to a hydrophilic colloid layer of a photographic material, which does appear to meet the limitations of the present claim 23.

Applicant has also argued that the Fujita reference fails to disclose using a combination on dyes of formula XI and I. The examiner would like to point out the examples of the reference, specifically inventive samples 108 and 114 which exemplify using dye III-34 (XI) in combination with dyes I-1 and I-4 (similar to present formula I).

Lastly, applicant has argued that the examples of the present specification demonstrate unexpected results in sharpness when the material has a film pH as specified by the present claims to be between 4.6 and 6.4. The pH of the material of the examples of Fujita is 6.2, which meets the present claim limitation. Alternatively, the Ohshima reference has been relied upon for a teaching teaches that it is preferable for the pH of the film material (the pH value of all of the constituent layers obtained by the coating the coating solution on the support) be between 5.0 and 6.5 which falls within the presently claimed range. If the pH of a silver halide material falls below 5.0, it causes a disadvantage in that the film hardening is lowered or the sensitivity is

lowered. If the pH of a silver halide material exceeds 6.5, it leads to desensitization upon exposure under conditions of high humidity or sensitivity fluctuation with the change of the time interval between the completion of exposure and the beginning of processing. This teaching provides additional motivation (besides the samples of Fujita having a pH of 6.2) for one of ordinary skill in the art to prepare a photographic material, such as that of Fujita, choosing to have the film pH be between 5.0 and 6.5. Also, the examiner has not suggested to modify the pH as the material of Fujita meets the pH limitation (the Ohshima reference is relied upon for its teaching as further support, but its citation does not negate the fact that Fujita meets the pH limitation alone). Therefore, the data in table 3 relating to the pH does not impact the present rejection.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C Walke whose telephone number is 703-305-0407. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Amanda C Walke  
Examiner  
Art Unit 1752

ACW  
August 26, 2002



JANET BAXTER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700